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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,997	04/28/2005	Helmut J W Meyer	60469-212; OT-5043	1645
7590		10/16/2007	EXAMINER NICHOLSON III, LESLIE AUGUST	
Karin H Butchko Carlson Gaskey & Olds Suite 350 400 West Maple Road Birmingham, MI 48009			ART UNIT 3651	PAPER NUMBER
			MAIL DATE 10/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/532,997	MEYER ET AL.
	Examiner	Art Unit
	Leslie A. Nicholson III	3651

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 25 September 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 35-55,57-60,62-73 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 35-55,57-60,62-73 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Response to Arguments***

1. Due to Applicant's arguments, all previous 35 USC 112 rejections are hereby withdrawn.

Applicant's arguments filed 9/25/2007 have been fully considered but they are not persuasive. Applicant argues "all parts of the linkages 23, including the projections 25, are subject to a tensile load as the projections 25 are part of the linkages". In response, projections 25 are not subject to a tensile load, but are instead subject to a shear load in the direction of conveyance. Regarding Boltrek, teeth 131 undergo a shear load when driven by the drivers 71. Applicant argues "it is not possible to form the linkages 23 or the projections 25 of a single piece of material without going directly contrary to Kraft's express teachings. Such a modification cannot be made". In response, Applicant has not provided any evidence as to why such a modification cannot be made. The Examiner has not found any evidence in Kraft as to why such a modification cannot be made or why the stampings are an improvement over other art.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, there is knowledge generally available to one of ordinary skill in the art to simplify the device of Kraft as shown in ¶3.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 35-55,73 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 35 and 73 recite the plurality of teeth made of a single piece of material.

It appears as though the claim is reciting a process for making a product. Does Applicant intend to recite the process of making the plurality of teeth? Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. See MPEP 2113.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 35-38,40-44,47-51,53-55,57-60,62-73 are rejected under 35 U.S.C.

103(a) as being unpatentable over Kraft USP 3,682,289 (see also Boltrek USP

3,677,388) in view of Harrison USP 3,387,697.

Kraft discloses a drive assembly comprising:

- A drive member (as disclosed in fig.2 of Boltrek) (C2/L50-57)
- A plurality of stepchain links (23) each having a plurality of teeth (25) made of an integrated piece of material
- Said plurality of teeth span an entire width of an entire interface between said stepchain links and said drive member (fig.1,3) (C2/L50-57)
- Said teeth width are substantially constant along said entire length of said chain (fig.1,3)
- Wherein said stepchain link comprises a central body portion, and at least some of said plurality of teeth are located on said central body portion (fig.1,3)
- Wherein the plurality of teeth are made of a single piece of material (fig.1)
- Wherein each said stepchain link comprises an inner portion and a distinct outer portion (fig.1)
- Said stepchain link including an end having two spaced apart portion that at least partially receive another end of another one of said stepchain links (fig.3)
- Wherein said inner portion includes an opening (opening for shaft 9) and said outer portion includes a corresponding opening, and an attachment member (9) is received through said opening and said corresponding opening to secure said inner portion to said outer portion (fig.3) (for the purpose of claim 59 since it does

not recite the outer portion not carrying a tensile load, the inner portion and outer portion as described in the instant application is the same as that shown in fig.3)

- Wherein said plurality of stepchain links form a chain having a length, and said plurality of teeth have a teeth pitch which is substantially constant along said entire length of said chain (fig.1)
- Wherein said inner portion comprises a first planar metal piece and a second planar metal piece, and a distance between said at least one planar metal piece and said second planar metal piece is less than a width of said bottom portion  
(As shown above, the inner portion comprises element 23 and carries the tensile load. The inner portion comprises several planar metal pieces 23. The distance between one planar metal piece of the many planar metal pieces and another planar metal piece that is 2 pieces away from the one planar metal piece is less than the distance between the two outermost planar metal pieces, since the distance between the two outermost planar metal pieces would be the width of the bottom portion)
- Kraft does not disclose specific values for the width of said interface between said drive member and said plurality of stepchain links. However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to

have the width of said interface between said drive member and said plurality of stepchain links to be between 40 mm and 100 mm.

Kraft discloses all the limitations of the claim but does not expressly disclose the plurality of teeth made of a single piece of material.

Harrison teaches the plurality of teeth made of a single piece of material (fig.2) for the purpose of providing a structure that is easier to fabricate.

At the time of invention it would have been obvious to one having ordinary skill in the art to make the plurality of teeth of a single piece of material, as taught by Harrison, in the device of Kraft, for the purpose of providing a structure that is easier to fabricate.

6. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft USP 3,682,289 in view of Harrison USP 3,387,697 further in view of Nakatani USP 5,779,583.

Kraft discloses all the limitations of the claim, but does not expressly disclose each said stepchain link comprising a single piece of die cast metal.

Nakatani discloses forming parts out of die-cast metal for the purpose of using a metal sufficient for handling heavy loading (C3/L33-38).

At the time of invention it would have been obvious to one having ordinary skill in the art to form parts out of die-cast metal, as taught by Nakatani, in the device of Kraft, for the purpose of using a metal sufficient for handling heavy loading.

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7. Claim 39,46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft USP 3,682,289 in view of Harrison USP 3,387,697 (in view of Nakatani USP 5,779,583; see ¶6) further in view of Tanigawa USP 6,213,278.

Kraft discloses all the limitations of the claim, but does not expressly disclose said die cast metal selected from the group consisting of aluminum and magnesium.

Tanigawa teaches die cast metal selected from the group consisting of aluminum and magnesium (C1/L53-54) for the purpose of choosing a material that is both strong and lightweight.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ die cast metal selected from the group consisting of aluminum and magnesium, as taught by Tanigawa, in the device of Kraft, for the purpose of choosing a material that is both strong and lightweight.

8. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kraft USP 3,682,289 in view of Harrison USP 3,387,697 further in view of Green USP 5,520,585.

Kraft discloses all the limitations of the claim and further discloses a plate (23) having said plurality of teeth (25) secured on said outer portion, but does not expressly disclose said plate being that of plastic.

Green teaches the use of plastic for the purpose of using a lightweight, non-rusting, self-lubricating material (abstract).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ the use of plastic, as taught by Green, in the device of Kraft, for the purpose of using a lightweight, non-rusting, self-lubricating material.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

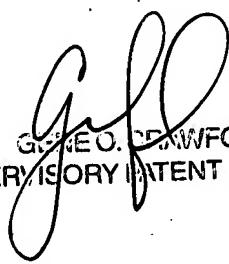
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

L.N.  
10/2/2007

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER